FOREWORD

The radio spectrum is both a precious and limited National resource. Within the Federal Aviation Administration (FAA), the Office of Spectrum Policy and Management is the sole authority for the spectrum allocation for new systems during equipment research and design as well as the FAA's single point-of-contact for coordination of operating frequencies with other Federal agencies and civil organizations.

Each country exercises its own sovereign rights in its use of the spectrum. Because radio transmission cannot be limited to a national border, international agreements and management practices are necessary. It is of utmost importance that we manage the radio spectrum efficiently and effectively in order to support air traffic requirements of our National Airspace System (NAS).

This order on spectrum policy and management is for the purpose of presenting spectrum engineering policy, guidance, and criteria to spectrum engineers. It is an update of technical information from many sources and offers the engineer a widely based tool necessary to manage the radio spectrum used to support the NAS.

Dissemination of this order throughout the Agency and to interfacing organizations will provide various offices a single source of knowledge of the functions and responsibilities of international and national regulation of the radio spectrum.

The magnitude of spectrum utilization in terms of amount and variety of equipment, power, emission characteristics, time-on-the-air, and geographical coverage is rapidly increasing and will continue to do so. Congestion, especially in the navigational aids and air/ground communications frequency bands, is a persistent problem which can lead to interference and, thus, the limiting or denial of required services. Conflicts in communications, radar, and navigational aids usually can be resolved; but resolution often requires time, money, and modification of service requirements. In peacetime, this may be simply annoying. In a national emergency, it could be devastating.

A communications, navigational aid, or radar facility out-of-service for interference is just as useless as one out for technical defects. Efficient, effective, and informed management of the spectrum is a prerequisite to the solution of congestion within FAA's purview. This can only be accomplished by professional spectrum engineering coupled with a dedicated staff of engineers and managers with appropriate authority to carry out their task.

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